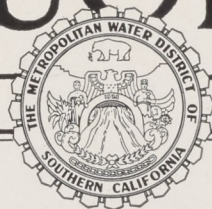


# • COLORADO RIVER • AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT

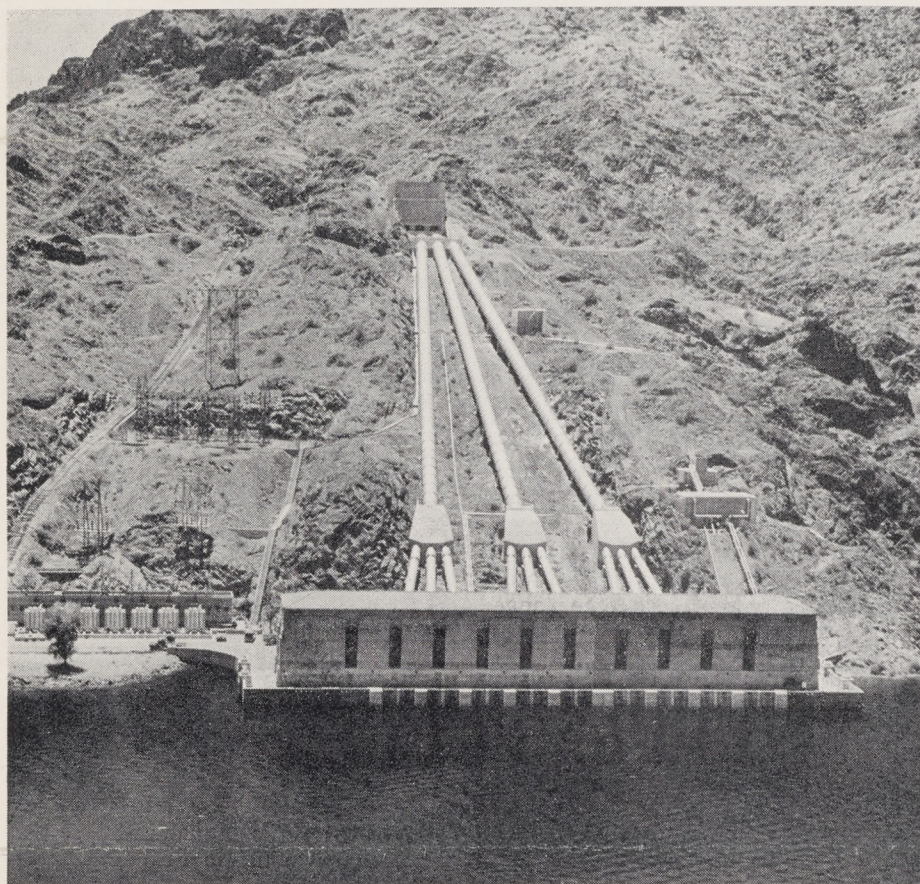


OF SOUTHERN CALIFORNIA

VOLUME XXVI

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NUMBER 6



Whitsett Intake Pumping Plant with all three delivery lines installed. Located two miles upstream from Parker Dam, this is the start of the Colorado River Aqueduct which delivers Colorado River water to the coastal plain of Southern California. Here the water is lifted 291 feet as it is started on its long trip across the mountains and deserts of California.

## Legislature Passes Huge Water Project Bill

The California State Assembly on June 17 passed the water resources development bond issue bill (S. B. 1106) which was introduced in the State Senate at the request of Governor Edmund G. Brown by Senator Hugh Burns of Fresno. The Senate had previously passed the measure.

The bill calls for a bond issue of \$1,750,000,000 to start on the development of the State's water resources. The

issue will now be submitted to the voters at the 1960 general election.

A large number of amendments to the bill, including 20 suggested by the Metropolitan Water District, were submitted to the Assembly but all were rejected and the bill was passed in the same form approved by the Senate.

Three basic objections to the bill as expressed by the District's Board of Directors are that (1) it does not assure adequate financing to complete construction of a statewide water project, (2) it does not assure a permanent wa-

(Continued on Page Five)

## Expansion Of Pumping Plants Nears Completion

The expansion of the five pumping plants on the Colorado River Aqueduct, begun in 1952, is nearing completion and all work is scheduled to be completed by the end of this year, according to General Manager and Chief Engineer Robert B. Diemer.

"With the pumping plants brought to full capacity and other construction work on the main aqueduct scheduled for completion early next year, the Metropolitan Water District will soon be able to deliver its full contractual share of Colorado River water (1,212,000 acre-feet annually) to the coastal plain of Southern California," Mr. Diemer declared.

During the first stage of construction of the aqueduct, it was determined that the five pumping plants were to be similar in design. Each plant was planned ultimately to contain nine pumps, each with a capacity of 200 cubic feet per second. Each group of three pumps is connected to one of the three delivery lines at each plant. Through these delivery lines water is lifted from the pumping plants up steep mountainsides and into tunnel portals or, in one instance, into an inverted siphon, at elevations much higher than the plants. The five plants raise the water a total of 1617 feet in crossing mountain barriers. Electric power to operate the giant pumps is purchased from the Federal Government by the District at Hoover Dam, and also is supplied, in part, from the District's share of Parker Dam power.

Initially, three pumps and one delivery line were installed at each plant, with the additional units to be added as required. Work on the installation of the six additional pumps in each of the five plants was set under way in 1952.

The magnitude of the pumping problem offered the possibility of large savings by the selection of equipment of

(Continued on Page Five)



# **COLORADO RIVER AQUEDUCT NEWS**

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

306 West Third Street

Los Angeles, California

Published monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.

Vol. XXVI June, 1959 No. 6

## **District Budget Reduced \$20 Million Under Last Year**

A budget totaling \$63,836,000 was approved for the ensuing fiscal year by the District's Board of Directors at its meeting on June 16. This is a reduction of \$20,619,000 under last year's budget when the figure was \$84,455,000.

The new budget was submitted by Director Hugh W. Stiles, Chairman of the Board's Finance and Insurance Committee. It provides \$33,900,000 for construction work in connection with the District's \$200 million expansion program which has been under way since 1952, \$28,736,000 for various purposes including bond servicing and operation and maintenance, and a \$1,200,000 provision for reserve for depreciation.

The more than \$20,000,000 reduction from last year was made possible because of fewer outlays for construction on the expansion program during the coming year. The expansion of the main Colorado River Aqueduct, which will bring the Aqueduct to its full planned delivery capacity of more than one billion gallons of water a day, is scheduled for completion early in 1960.

## **Mr. Diemer's Mother-in-law Dies In Wyoming At Age 91**

Mrs. Daniel Speas, mother-in-law of General Manager and Chief Engineer Robert B. Diemer, passed away in Casper, Wyoming, on June 12 at the age of 91. She had spent about six out of the last 12 years living with Mr. and Mrs. Diemer at their home in Pasadena and, despite her advanced years, made numerous trips over the Colorado River Aqueduct system.

She was one of the oldest pioneer residents of the Casper area, having homesteaded a ranch near there with her husband in 1888. They lived happily on the ranch for nearly 60 years until

## **Contract Awarded For West Coast Feeder Line**

The Board of Directors of the Metropolitan Water District on June 16 awarded a contract in the amount of \$7,987,588 to Vido Artukovich and Son, Inc., for the construction of the West Coast Feeder pipeline on the Colorado River Aqueduct distribution system. This was the low bid of six received.

The contract calls for the construction of approximately 15 miles of 60 and 66-inch inside diameter welded steel pipeline extending from the District's Lower Feeder in South Gate southerly for about two miles and westerly along El Segundo Boulevard for about 13 miles to Aviation Boulevard.

The new pipeline will have a capacity of 150 cubic feet of water per second, one third of which will be used to supplement existing water delivery lines in the West Basin Municipal Water District area. The remaining 100 cubic feet per second will be used for injection into the underground basins to replenish these basins and to halt the intrusion of sea water.

Construction work on the line will take place in the cities of South Gate, Downey, Paramount, Lynwood, Compton, Hawthorne and Gardena and in unincorporated territory in Los Angeles County. The contractor will start work at the west end of the line and work easterly in order to precede some planned road construction along the west end of the line. This work is scheduled for completion by December 31, 1960.

Engineering and administration costs, District furnished materials and right of way will bring the total investment by the District to \$9,250,000.

Mr. Speas died in 1945. For the past two years she had been making her home at the family ranch with a daughter, Mrs. William Rae.

She was born Mary Almeda Bice, the daughter of Mr. and Mrs. James Bice, in Annawan, Illinois, on September 11, 1867. In 1886 she moved with her parents to Central City, Nebraska, where the same year she married Daniel N. Speas. The young couple pushed on to Wyoming and in 1888 homesteaded the present ranch where their five children were born and reared.

She is survived by four daughters; Mrs. R. B. Diemer, Pasadena; Mrs. F. E. Brenner, Parkin, Arkansas; Mrs. H. J. Robinett, Casper; and Mrs. William Rae of the family home; 17 grandchildren and 41 great grandchildren.

## **For the RECORD**

(The following items are noted from the report of General Manager and Chief Engineer Robert B. Diemer, filed June, 1959, covering District operations for May, 1959.)

**Colorado River**—The water surface of Lake Mead dropped 1.35 feet and usable storage decreased 172,000 acre-feet to 20,058,000 acre-feet on May 20, 1959, and then continued to rise to elevation 1172.58 and 20,220,000 acre-feet of usable storage on May 31. The total drop in elevation since the seasonal maximum on July 7, 1958 is 34.85 feet and the decrease in storage is 4,773,000 acre-feet on May 20. Average rate of discharge at Hoover Dam for May was 15,000 cfs.

**Pumping and Power**—Hayfield plant delivered 66,957 acre-feet of Colorado River water during May. Pumping was on a 5-pump basis until 11:45 p.m. May 2, and on a throttled 6-pump basis thereafter except for 17 hours and 2 minutes of 5-pump operation. The District's share of Parker energy was 24,479,330 kwhrs. Peak deliveries to and from Edison Company were 105,000 kw and 150,000 kw respectively.

**Weymouth Softening and Filtration Plant**—Colorado River water was softened from 306 to 202 ppm of hardness at an average rate of 509 cfs during May. Daily rate of flow varied from a maximum of 582 cfs to a minimum of 451.

**Construction**—On installation of Pumping Units 7, 8 and 9, the contract is 85% complete, with work in progress at all five plants. At Intake, work is 82% complete; at Gene, 90%; at Iron Mountain, 90%; Eagle Mountain, 85%; and 81% complete at Hayfield.

The contract is 54% complete on Canals and Box Siphons—Schedules 11C, SD1C, SD2C, SD3C, and SD4C.

On Pipe Line—Schedules SD8P and SD9P—work is 97% complete; Schedules SD10P and SD11SC, 98% complete; Schedules 76SC, 77SC, and 78SC (Lower Feeder) notice of completion filed May 15, 1959.

Work on Pipe Siphons—Schedules 11P, 12P and SDXP—work is 60% complete.

Work on Pressure Control Structures (Lower Feeder) is 1% complete.

On the Enlargement of Lake Mathews, work on the contract is 4% complete.

**Purchasing**—Total expenditures covered by 407 purchase orders and 6 agreements during May aggregate approximately \$125,539.





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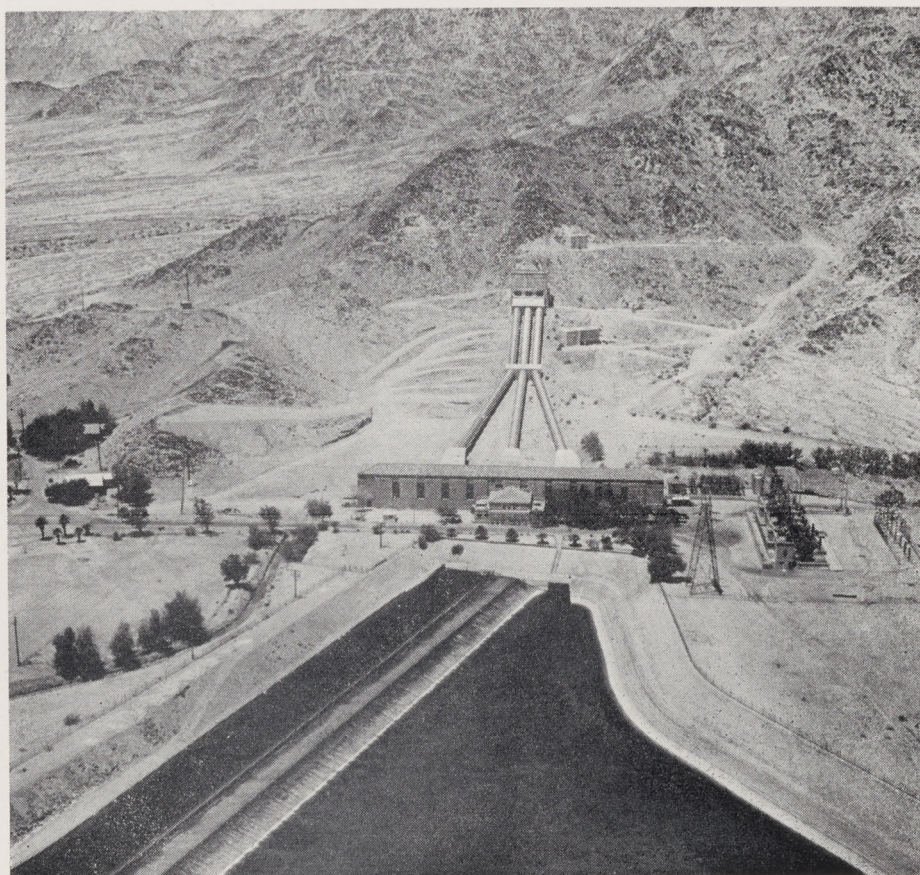
At the left is a recent aerial view of Gene Pumping Plant showing all three pump delivery lines installed. At this pump lift, Colorado River water is lifted 303 feet on its long journey to the coastal plain of Southern California.

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To the right is a photo of Iron Mountain Pumping Plant as it now looks. Originally there were three pumps and one delivery line installed at each of the five pumping plants on the Colorado River Aqueduct. The pump lift here is 144 feet.

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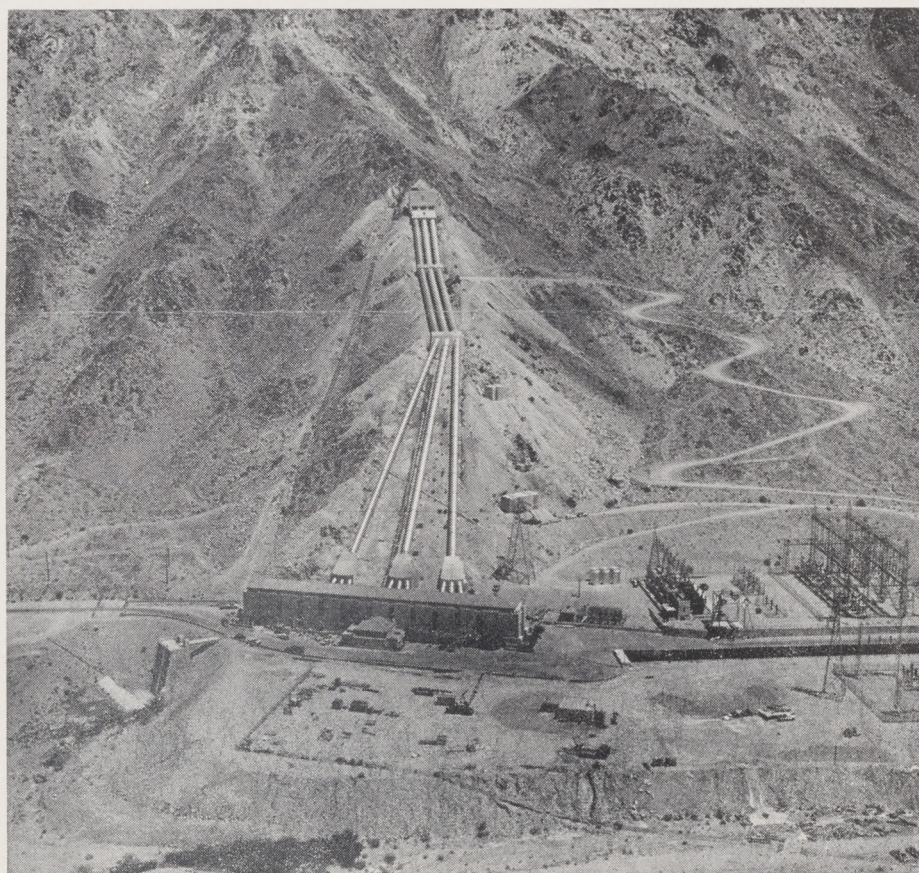






Eagle Mountain Pumping Plant with its reservoir in the foreground is shown at the left. Here, as at each of the pumping plants, work is now going forward on the installation of the final three pumps. Here the water is lifted 438 feet.

Hayfield Pumping Plant to the right is the most westerly pumping plant on the Colorado River Aqueduct and has the highest pump lift, 441 feet. From here the water moves by gravity flow to Lake Mathews, the Aqueduct's terminal reservoir.





## Pumping Plant Expansion

(Continued from Page One)

high efficiency and proper operating characteristics. The almost complete absence of comparable experience in pump design made such a selection difficult. Therefore, a program of investigation was undertaken at a laboratory installed for the purpose at the California Institute of Technology and operated under the joint direction of the District and Institute staffs. The laboratory was designed for rapid and precise testing of model pumps at various speeds and under a wide range of operating conditions. Many thousands of tests were made to determine the best type of pump, most suitable speed, depth of setting and other essential characteristics.

Following these tests, specifications were prepared for the 15 pumps of the first installation. The basic design of the pumps evolved under this program has proved so satisfactory through the years that the remaining 30 pumps were built according to similar specifications.

In addition to the installation of the pumps, the expansion work at the pumping plants called for the extension of the pumping plant buildings and the construction of two more delivery lines.

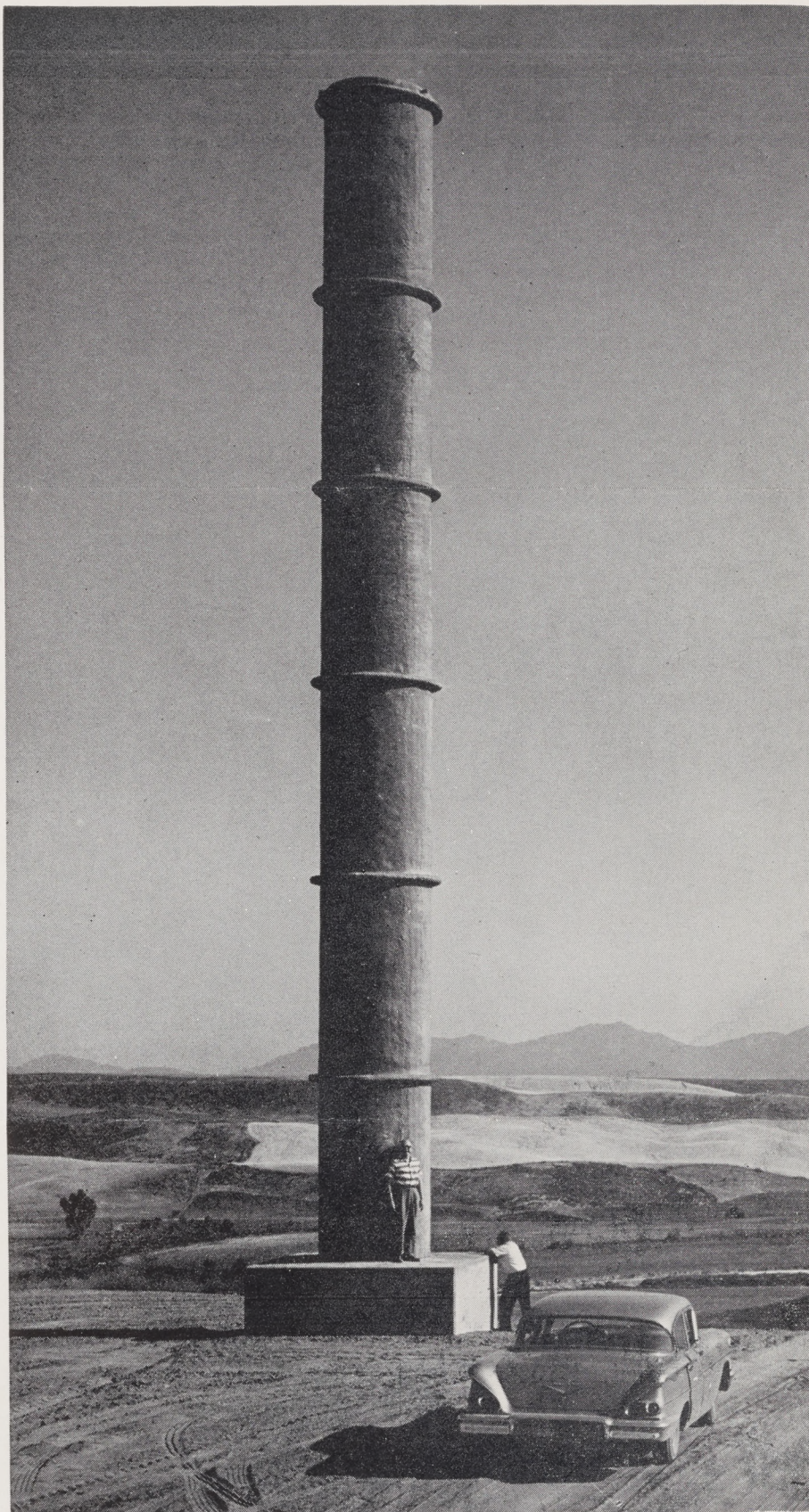
The installation of delivery line number two was completed in 1956 and the extension of the pumping plant buildings in 1957. Pumping unit number four was placed in operation in August of 1956 and pumping unit number five followed close behind. The installation of pumping unit number six was completed in April of 1958 and the third delivery line was completed in March of 1959. The contract for the installation of pumping units seven, eight and nine has a completion date of December 31, 1959, and when the work is accepted by the District, the entire pumping system on the Colorado River Aqueduct will be completed.

## Water Project Bill

(Continued from Page One)

ter supply for Southern California, and (3) it would permit diversion of water bond funds to projects not specified in the bond issue.

The District Board earlier had joined with six other Southland agencies and civic groups in urging adoption of a State water project bill that would protect the integrity of water contracts with the State by a constitutional amendment, provide adequate financing to complete the project, and provide a bond issue that would be specific as to its exact purposes.



Pictured above is a 67-foot high standpipe on the Second San Diego Aqueduct now under construction. Structures such as this serve to relieve excessive pressures by allowing the water to rise in the pipe when the pressure might otherwise cause damage to the underground pipeline. It also serves to release air from the line when it is being filled with water and to replace the air when the line is being emptied, thus preventing the creation of a vacuum.



# NEWS FROM FIELD AND OFFICE

Vicki Merrithew, daughter of Distribution Engineer Bill Merrithew, was the recent recipient of a high musical award presented by the California Music Teachers Association, Pasadena Chapter. She was presented with a pin and a scroll "in recognition of outstanding musical achievement". Vicki plays the bassoon in the Wilson Junior High School orchestra and in the school's wood wind quartet. She plays the same instrument in the San Gabriel Symphony Orchestra and its wood wind quartet, and also plays the piano for school talent shows and other school functions.

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Bonnie Pulver, daughter of Maintenance Man and Mrs. Byron Pulver, and Pat Ayers, daughter of Station Electrician and Mrs. Murrell Ayers, were chosen to represent Parker, Arizona, High School at the Annual Arizona Girls State Convention in Tuscon from June 1 to 7. Both girls, who will be Seniors next year, enjoyed the legislative and governmental meeting immensely.

R. Bruce Carnahan, Assistant Engineer at Gene and Intake, a Lt. Commander in the Naval Reserve, was selected by the 11th Naval District to attend the National Defense Resources Conference at the University of Utah in Salt Lake City from May 9 to 23.

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James Hale, Junior Draftsman, and his wife, Dorothy, became parents for the first time on June 5 when a baby girl arrived at Glendale Community Hospital. The young lady weighed 8 pounds 3 ounces and has been named Susan Kay.

\* \* \*

Marvin Stephens, President of Group I of the Employees Association, says that much of the credit for the success of the Annual Spring Dinner Dance should go to Catherine Gallagher, who served as Party Chairman and planned and conducted the party, and to Mrs. George Cahill and Mrs. Harris V. Crawshaw, who decorated the tables. Excellent food, good music and a jovial atmosphere combined to make the evening very enjoyable.

John D. Lott, son-in-law of Assistant Engineer Dave Smith, received his Doctor of Medicine degree from the College of Medical Evangelists at Loma Linda, California, on June 7. Dave is working on the enlargement of Lake Mathews.

\* \* \*

District employees, their families and friends are invited to attend the annual summer picnic to be held at San Dimas Foothill Park in San Dimas on July 26. Dinner will be pot-luck with each family bringing their own main serving. Drinks and ice cream will be furnished and there will be prizes for the children. A donation of 75 cents per family is asked to defray the cost of the drinks, ice cream and prizes.

\* \* \*

The District Board of Directors, acting on the recommendation of its Organization and Personnel Committee headed by Director Robert E. Austin, amended regulations covering annual vacations so as to grant 20 working days of vacation to employees with 22 years of continuous employment. The previous maximum vacation allowable was 15 working days after 10 years.



Shown above are a number of District employees and their families and friends participating in a conga line at the Annual Spring Dinner Dance sponsored by Group I of the Employees Association. The affair was held

at the Chevy Chase Country Club in Glendale on June 19 and everyone proclaimed it one of the best parties they had ever attended. Officers of the Association predicted an even greater turnout at the next party.